

Application No. 10/070,690
Art Unit 1774
November 19, 2004
Reply to Office Action of August 24, 2004

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the present application.

Listing of Claims:

1. **(Currently Amended)** A fluorine-containing polymer comprising 70 to 95% by weight of tetrafluoroethylene, 5 to 25% by weight of hexafluoropropylene and 0 to 20% by weight of perfluoroalkyl vinyl ether,

wherein a melt flow rate (MFR) (g/10 min., ASTM D2116) at 372°C is within a range from 0.1 to 100, and

the total content (ppm) of an alkali metal and an alkali earth metal does not exceed the value obtained by calculating from the melt flow rate (MFR) at 372°C according to the formula (1):

$$5.2 \times e^{0.125(\text{MFR})} + 2 \quad (1)$$

and exceeds the value obtained by calculating according to the formula (2):

$$0.35 \times e^{0.125(\text{MFR})} \quad (2), \text{ and}$$

wherein substantially all polymer chain terminals comprise ~~-CF₂H-~~
-CF₂H, and

a compound containing the alkali metal or the alkali earth metal is a hydroxide or carbonate salt.

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2. (Canceled)

3. (Currently Amended) An electric wire or cable coated with a fluorine-containing polymer wherein the total content (ppm) of an alkali metal and an alkali earth metal does not exceed the value obtained by calculating from a melt flow rate (MFR) (g/10 min., ASTM D2116) at 372°C according to the formula (1):

$$5.2 \times e^{0.125(MFR)} + 2 \quad (1)$$

and exceeds the value obtained by calculating according to the formula (2):

$$0.35 \times e^{0.125(MFR)} \quad (2), \text{ and}$$

wherein substantially all polymer chain terminals comprise ~~-CF₂-~~
-CF₂H, and

a compound containing the alkali metal or the alkali earth metal is
a hydroxide or carbonate salt.

4. (Canceled)

5. (Previously Presented) The electric wire or cable according to claim 3, wherein the fluorine-containing polymer is a fluorine-containing polymer prepared by emulsion polymerization.

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6. **(Previously Presented)** The electric wire or cable according to claim 3 or 5, wherein the fluorine-containing polymer comprises the three monomers tetrafluoroethylene, hexafluoropropylene and perfluoroalkyl vinyl ether.

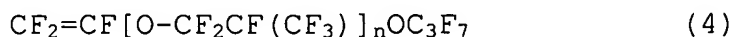
7. **(Previously Presented)** The electric wire or cable according to claim 3, wherein the contained alkali metal and alkali earth metal comprise at least one of potassium and sodium.

8. **(Previously Presented)** The fluorine-containing polymer according to claim 1, wherein the tetrafluoroethylene is present in an amount of 72 to 96% by weight, and the hexafluoropropylene is present in an amount of 4 to 28% by weight.

9. **(Previously Presented)** The fluorine-containing polymer according to claim 1, wherein the perfluoroalkyl vinyl ether is present and is represented by formula (3):



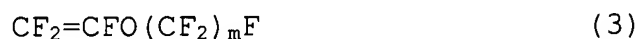
wherein m is an integer of 1 to 6, or a vinyl ether represented by the formula (4)



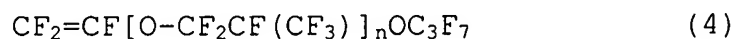
wherein m is an integer of 1 to 4.

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10. **(Previously Presented)** The electric wire or cable according to claim 6, wherein the perfluoroalkyl vinyl ether is present and is represented by formula (3):



wherein m is an integer of 1 to 6, or a vinyl ether represented by the formula (4)



wherein m is an integer of 1 to 4.

11. **(Previously Presented)** The fluorine-containing polymer according to claim 1, wherein the contained alkali metal and alkali earth metal comprise at least one of potassium and sodium.

12. **(Previously Presented)** The electric wire or cable according to claim 6, wherein the contained alkali metal and alkali earth metal comprise at least one of potassium and sodium.

13. **(Previously Presented)** The fluorine-containing polymer according to claim 1, wherein the total content (ppm) of an alkali metal and an alkali earth metal does not exceed the value obtained by

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calculating from the melt flow rate (MFR) at 372°C according to the formula (5):

$$1.3 \times e^{0.125(MFR)} + 2 \quad (5)$$

and exceeds the value obtained by calculating according to the formula (6):

$$0.7 \times e^{0.125(MFR)} \quad (6).$$

14. **(Previously Presented)** The electric wire or cable according to claim 3, wherein the total content (ppm) of an alkali metal and an alkali earth metal does not exceed the value obtained by calculating from the melt flow rate (MFR) at 372°C according to the formula (5):

$$1.3 \times e^{0.125(MFR)} + 2 \quad (5)$$

and exceeds the value obtained by calculating according to the formula (6):

$$0.7 \times e^{0.125(MFR)} \quad (6).$$

15. **(Currently Amended)** The fluorine-containing polymer according to claim 1, wherein the contained alkali metal and alkali earth metal is ~~at least one selected from the group consisting of a hydroxide, a carbonate salt, salt, a sulfate salt and a nitrate salt.~~

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16. **(Currently Amended)** The electric wire or cable according to claim 6, wherein the contained alkali metal and alkali earth metal is at least ~~one selected from the group consisting of a hydroxide,~~ a carbonate salt. ~~salt, a sulfate salt and a nitrate salt.~~